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Editor

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The Small Hospital
Its Need and Importance in The Community*

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THE term "small hospital" is here taken to mean any institution whose bed capacity is less than one hundred beds. Many institutions whose bed capacity is between fifty and one hundred beds will have problems which are more akin to those of the large hospitals than of the smaller institutions whose bed capacity is fifty or less. It is this latter group with which we are concerned. The major problems of this group of small hospitals have to do with equipment, staff, and the realization that their field of activity is somewhat limited by the nature of their set-up.

Community Need of Hospital

In the year 1936 there were in the Province of Alberta seventy-four hospitals belonging to the small hospital class, with an average bed capacity of thirty. In that same year there were in the province forty-five institutions whose bed capacity was less than thirty. In view of these facts it might be well to consider an institution whose bed capacity is in the neighborhood of thirty beds.

The average hospital of thirty beds cannot assume the responsibility of promising to give the patient any or all of the various services of which he has from time to time heard. The reason is very simple—the small hospital cannot carry either the staff or the equipment to provide all the major services which we expect in the larger hospital. It is not fair to either the small hospital or to the patient to expect that these services should be given.

The first and prime need of a small hospital is the *need for a small hospital.* This may sound somewhat of a Hibernianism, but the fact remains that the community should be in need of the services of a hospital before one is built. There are a number of small hospitals in my province operating at from twenty per cent to thirty per cent of their bed capacity throughout the year. This would not appear to indicate a great need for a hospital in that particular community. We will assume that it is evident that so far as the community is concerned a hospital is needed.

The second need from the standpoint of the hospital itself, is that the building should be constructed in accordance with the plans and specifications of someone *experienced in hospital building and equipment.* This is a technical problem which we do not need to elaborate, except to stipulate that the hospital be carefully and definitely planned and not allowed "just to grow up".

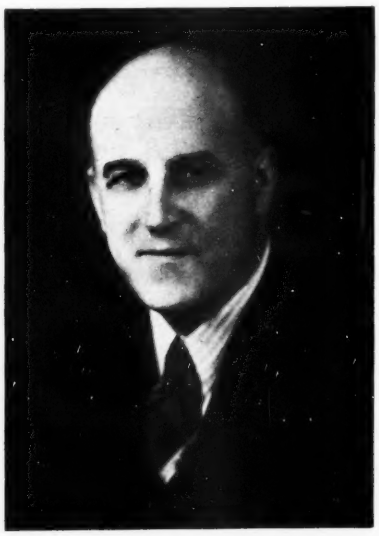
Lamont Public Hospital, Lamont, Alberta.

The Medical Staff

The third, and a cardinal need of the small hospital, is the *medical staff.* In our experience, too often the small hospital has been built in the hope that a medical staff would be drawn to the institution, as it were,

*Presented at the American College of Surgeons' Sectional Meeting, Winnipeg, March, 1939.

and supply it with this much needed part of its operating personnel. The medical staff should consist of a group of not less than three doctors who are congenial and work together in a spirit conducive to the best interests of the patient and the hospital. The medical staff should be large enough that the work may be divided and, to some degree, specialization carried out. One might suggest that a staff of three men could work as follows: one man for surgery and x-ray, another man to take primary responsibility for obstetrics and anaesthetics, and a third man to look after general medicine and supervise the laboratory. In this way the load is shared to the mutual advantage of the men concerned and makes for greater efficiency and better treatment of the patient. Needless to say, in a small town with a small hospital the members of the medical staff ought to work together as associates of one clinic. They should not practice as individuals where competition takes all the life out of the trade.



Morley A. R. Young, M.D., C.M.

In considering further the needs of the small hospital there are certain members of the staff who are fundamental to the efficient operation of any hospital however small. To arrive at an approximate idea of the staff necessary, one should take a complete set-up for a well organized large hospital, and then begin by overlapping and eliminating until the irreducible minimum is reached, leaving one with a small but efficient staff. The following suggestions are made on the basis of a minimum staff for a thirty-bed hospital.

Personnel

First on our list is the *superintendent* He will also act as business manager since the small hospital needs someone trained in hospital business and management to carry out efficiently and well the various aspects of this important activity. Thus the organization is headed up under the control and direction of one individual.

We next require a *superintendent of nurses.* It is obvious that someone must be in charge of the nursing personnel of the small hospital, and the writer would suggest that the matron be also trained in operating room technique and be able to take over that responsible position when necessity demands it.

A *dietitian is next* added to our staff. From our own experience in Lamont (Lamont Hospital has 78 beds), there is no doubt in our minds that the small hospital needs a dietitian. Not only are the doctors' orders for special diets much more efficiently and rapidly carried out, but the hospital meals for the staff and patients alike are vastly better. From the standpoint of the buying and preparing of food, the dietitian, on the drab basis of dollars and cents, pays her way. She also could occupy a dual position, including housekeeping duties along with her dietetics.

An *x-ray technician* is another of the cardinal needs of the small hospital. My belief in this respect is borne out by several facts. Not many months ago one of the larger hospitals of the small hospital group was faced with a suit for damages because of a burn received by a patient during an x-ray examination. It was found during the course of investigation that there was no one on the hospital staff who had had sufficient training in x-ray work to know whether or not the patient was being over-exposed. Again, at a recent radiological convention at Calgary one of the radiologists from a large hospital made the statement that of all the plates forwarded to him for diagnosis by the various smaller hospitals throughout the province not more than 20 per cent of them were of sufficient quality that he cared to venture an opinion or to give a diagnosis. It would seem from this that many of the x-ray pictures taken in the small hospital are useless because of faulty technique. The x-ray technician might also take over the responsibilities of the laboratory.

As for *dispensing,* the compounding and dispensing of drugs in any hospital is sufficiently important that it should not be handled by anyone not specially trained. The obvious solution of this problem in the small hospital is to arrange that the local druggist should be at least a part time member of the hospital staff and take on the responsibility of the dispensing.

Depending on the type of heating and the source of power, many of our smaller hospitals will also be faced with the necessity of engaging an *engineer* who has definite electrical and mechanical training

In hospitals of fifty beds or more a trained *laundryman* is also a need. In hospitals with beds of thirty and under this work might be carried on by washer-women, but it appears to me that in hospitals above this capacity a trained man would be a definite economy.

Standing Orders

To ensure uniformity, some responsible organization, such as the Department of Public Health, with the assistance of the College of Physicians and Surgeons, should assume the task of preparing a list of standing orders in connection with the various major surgical, obstetrical, and medical procedures. These orders would set forth the minimum requirements for efficient treatment and would be a guide for the various activities in the small hospital. In surgery a minimum pre-operative and post-operative regime would be outlined and the operating set-up stipulated. In medicine the minimum need for handling diabetic or nephritic cases would be outlined. The obstetrician would know whether or not his hospital could carry through a case of toxaemia of pregnancy. Such a program would be of inestimable value to the small institution. Emergencies of all kinds would of course be handled as they arose and as well as possible under the circumstances.

The importance to a community of its hospital may be

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Artificial Respiration
Its Importance in Hospital Emergency Practice*

By WILLS MACLACHLAN, B.A.Sc., Toronto*
Chairman of Committee on Resuscitation, Health League of Canada

(Many lives have been lost because of an inadequate knowledge of the best methods of resuscitation. There is a feeling also that many lives could have been saved had those in charge of resuscitation procedures continued their efforts rather than decide that further efforts were useless. Sometimes interns and staff doctors are called from a nearby hospital; sometimes nurses or ex-nurses have an opportunity to render first aid; sometimes the patient is rushed directly to a nearby hospital. Apparently few hospitals give organized instruction in resuscitation.—Editor.)

IT is not only desirable but absolutely necessary that the interns and nurses being trained in the hospitals receive explicit instructions and actual practice in approved methods of artificial respiration. At present the training of interns and nurses in these methods is carried out in only a few hospitals. It is timely that a definite, clear cut routine of instruction in artificial respiration be instituted in our various hospitals so that they may efficiently meet emergencies requiring resuscitation.

Many persons have been resuscitated from drowning, gas poisoning and electric shock by well trained people who have applied artificial respiration promptly and have continued the application for the required length of time. Some of these victims have been submerged in water for considerable lengths of time. Some of them have been subjected to high concentrations of carbon monoxide gas and others have received extremely severe electric shocks. It has been found, in actual practice, that one of the most important points in regard to these resuscitation cases is the *prompt* and *continued* application of artificial respiration by well trained people.

As the public utilities have had this problem more prominently before them than, possibly, have others, it is only natural that they have instituted a careful study of cases and have carried out laboratory research. Based upon this information, the staffs of these public utilities have been instructed in the correct methods of artificial respiration and have been trained in its use. The correct procedure has been taught by demonstrations and also by practicing artificial respiration as victim and as operator, regularly, over the period of their employment. This instruction, training and practice has been found necessary, to be sure that the most efficient method is being applied and that after an accident, in spite of confusion and excitement, prompt application of artificial respiration be carried out and that this attempt at resuscitation be prolonged for a sufficient time for the life to be saved.

At times these employees are called upon to render assistance to outsiders and at these times a doctor or nurse might be called. It is quite apparent that to maintain the prestige of the medical and nursing professions, as well as to save life, it is most important that adequate teaching and training of the members of these professions in the treatment of drowning, electric shock and gas poisoning cases is necessary, and it is for this reason that the following points are put forward:

Procedure Recommended

After a person has been *submerged* for a few minutes and is removed from the water, artificial respiration should be immediately applied. It is usually possible to have air enter and leave the lungs. In certain cases there may be a *spasm of the glottis* interfering with the free passage of air in and out of the lungs.† Be sure that the passage is free and that artificial respiration is immediately started and continued as long as is necessary.

When a victim breathes *carbon monoxide*, the haemoglobin in the blood takes up carbon monoxide in preference to ozygen, and the more carbon monoxide that is breathed, the more saturated will the blood become with this gas. The patient becomes unconscious and frequently stops breathing. Artificial respiration should be immediately applied, preferably in a warm room containing fresh air. It has also been found to be of advantage in gas poisoning to have the patient breathe oxygen, to which had been added carbon dioxide, at the same time that artificial respiration is being carried out. It has been found that carbon monoxide will be more readily released by the blood in the presence of abundant oxygen.

After an *electric shock* paralysis of all the higher nerve centres occurs, which results in a modification of the heart beat, cessation of breathing and possibly a paralysis of the vascular system. The usual signs of death, such as eye reflex, are *not* dependable after electrical shock, as there have been known to be cases in which the eye reflex would indicate that the patient was dead, whereas the patient had later been resuscitated. It was necessary in one case to carry out artificial respiration for *eight hours* after an electrical shock, before the patient breathed voluntarily.

*(Mr. Wells Maclachlan, the author, is a department head in the Hydro-Electric Power Commission of Ontario and is Secretary-Treasurer and Engineer of the Electrical Employers Association of that province. He is chairman of the Accident Prevention Committee of the Canadian Electrical Association and Secretary of the Accident Prevention Committee of the Association of Municipal Electric Utilities of Ontario. He also holds office in several American organizations.—Ed.)

† Full doses of atropine administered hypodermically are recommended to overcome this spasm. Sometimes a catheter is of value.—Ed.

The most successful method of carrying out artificial respiration is as follows:

Apparent Drowning, Gas Asphyxiation and Electrical Shock

Apparent Drowning

Quickly remove victim from water and place on ground or other hard surface.

Gas Asphyxiation

The first thing to do is to get the patient into fresh air quickly. Fresh air does not mean out of doors in cold weather.

Do not breathe gas yourself, even for a short time. If it does not overcome you, it will cut down your strength.

Electrical Shock

The victim must be freed from the contact as promptly as possible. Use a dry stick, dry rope, dry coat or other non-conductor.

The use of your own hands without protection is dangerous and may add another victim to the accident.

Artificial Respiration

Follow these instructions *even if victim appears to be dead.*

As soon as possible, feel with your fingers in the patient's mouth and throat and remove any foreign body (tobacco, false teeth, etc.) If the mouth is tight shut, pay no more attention to it until later. Do not stop to loosen the patient's clothing, but immediately begin actual resuscitation. Every moment of delay is serious. Proceed as follows:

(1) Lay the patient on his belly, one arm extended directly overhead, the other arm bent at elbow and with the face turned outward and resting on hand and forearm, so that the nose and mouth are free for breathing. (See Fig. 1.)

(2) Kneel, straddling the patient's thighs with your knees placed at such a distance from the hip bones as will allow you to assume the position shown in Fig. 1.

Place the palms of the hands on the small of the back with fingers resting on the ribs, the little finger just touching the lowest rib, with the thumb and fingers in a natural position and the tips of the fingers just out of sight. (See Fig. 1.)

(3) With arms held straight, swing forward slowly so that the weight of your body is gradually brought to bear upon the patient. The shoulder should be directly over the heel of the hand at the end of the forward swing. (See Fig. 2.) Do not bend your elbows. This operation should take about two seconds.

(4) Now immediately swing backward so as to completely remove the pressure. (See Fig. 3.)

(5) After two seconds swing forward again. Thus repeat deliberately twelve to fifteen times a minute the double movement of compression and release, a complete respiration in four or five seconds.

(6) Continue artificial respiration without interruption until natural breathing is restored; if necessary, four hours or longer, or until a physician declares the patient is dead.

(7) As soon as this artificial respiration has been started and while it is being continued, an assistant should loosen any tight clothing about the patient's neck, chest or waist. *Keep the patient warm.* Do not give any liquids whatever by mouth until the patient is fully conscious.

(8) Avoid strain on the heart when the patient revives; he should be kept lying down and not allowed to stand or sit up. If the doctor has not arrived by the time the patient has revived, he should be given some stimulant, such as one teaspoonful of aromatic spirits of ammonia

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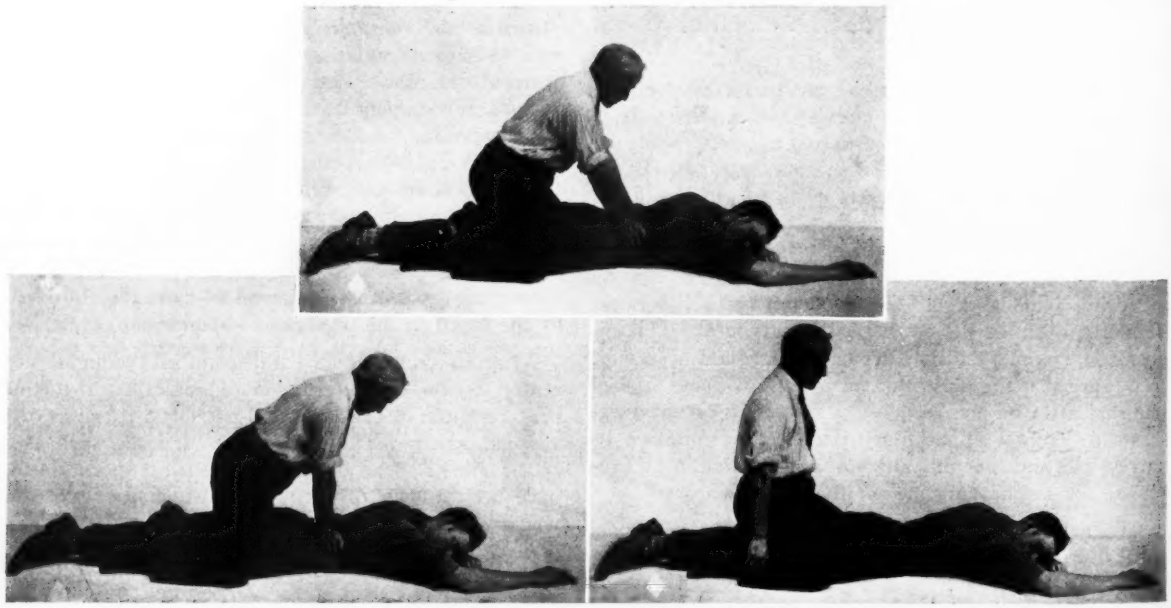


Figure 1 (Top)—Position in which patient should always be placed and kept until conscious; also first position for operator starting artificial respiration.
Figures 2 and 3 (Left and Right)—Second and third positions of operator giving artificial respiration.

Preparation of Intravenous Solutions at the Royal Jubilee Hospital, Victoria, B.C.

By A. B. NASH, M.D., C.M., M.R.C.O.G., F.A.C.S.

DISSATISFACTION with methods previously employed in the preparation and administration of ordinarily required intravenous solutions in this hospital was, as is usually the case, prompted by the occurrence of reactions in a sufficiently high proportion of cases to act as a deterrent to many of the attending staff in employing this most important and useful therapeutic measure. There was no doubt that many patients, especially those immediately post-operative, were denied the maintenance of proper fluid balance and the opportunity of parenteral nourishment which can be provided by this means.

It was felt that reactions were to be attributed to the employment of insufficiently controlled, even haphazard, and certainly inadequate methods in the preparation of the offending solutions. A survey of the situation gave rise to the conviction that it should be possible for safe and satisfactory solutions to be manufactured by and in the hospital at reasonable cost without the necessity to purchase relatively large quantities of commercially prepared solutions.

It was soon realized that, however strong this conviction might be, there remained the urgent necessity to devise or find a method which might be successfully utilized. This problem was rendered acute by the lack of time, necessary technical training and facilities to carry out an experimental investigation which would be required in the elaboration of a suitable technique.

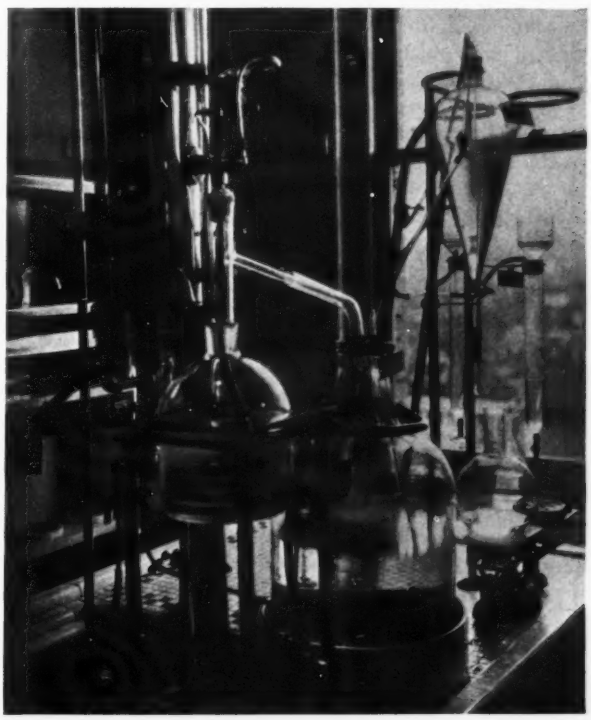
Reference to the literature was rewarded by a description by Walter* of a method which we were led to believe would fulfil all the requirements of our particular problem, including the details of administration. That such has proven to be the case, we are able to supply abundant and enthusiastic testimony and are further anxious to commend the method employed in this hospital to others who are doubtless beset by the same difficulties as we had previously encountered.

To the principles so clearly set forth in Walter's original article we make no assumption of being able to add or modify, but it is felt that reference to the experience gained in applying these principles to local conditions and requirements and to the results subsequently obtained over an appreciable period of time will perhaps justify this article and be of assistance to others in embarking upon a solution of this problem.

Special Preparation Room Essential

Because of the obvious necessity for uniform and controlled technique, not only in the preparation of solutions, but in the cleansing and care of the necessary apparatus, the first requirement to be met was the establishment of a central supply room. All the necessary equipment, with the exception of steam sterilizers, is housed in a room approximately 10 feet by 15 feet. This is situated on the operating room floor and all autoclaving is done at an especially assigned time in the operating room steam sterilizers.

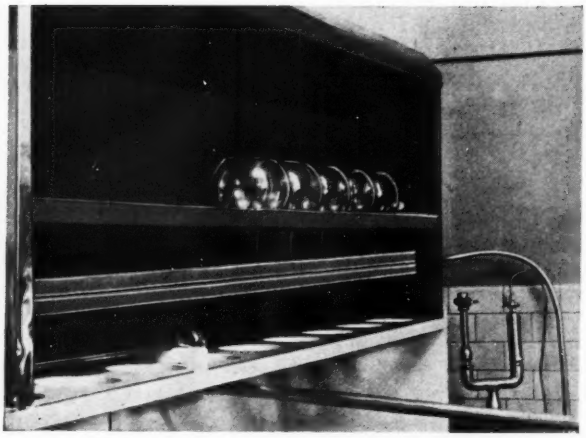
The central supply room is staffed by two graduate nurses, whose familiarity with the equipment and efficiency of technique is in large measure due to the fact that they played an important part in its creation and that they have been largely responsible for working out the necessary details by a process of trial and error. In fairness to



This shows the first condenser, the boiler with monel metal coil, the second condenser and connected thereto, the separatory funnel. In the right background are seen the two 300 cc. burettes with Jena glass filters in place. Beneath these are the weighing scales with a counterbalanced flask in place.

* Walter, C. W., Preparation of Safe Intravenous Solutions. S.G. & O. 63:5. November, 1936.

Note: The apparatus used in the employment of the methods described is, with the exception of that devised and constructed by the hospital engineer, Mr. M. Madeley, manufactured and supplied by The Macalaster Bicknell Company, Cambridge, Mass.



Monel metal rack for rinsing of inverted flasks with distilled water. Note supply pipe from pressure tank drain-pipe to sink.

the method and with regard to economic considerations, it is necessary to point out that they have other responsibilities and duties than the preparation of intravenous solutions and that the whole time of two nurses is not required for this purpose alone. Yet this arrangement provides for continuity and uniformity, in spite of the exigencies of "hours off duty", holidays and possible illness.

It is postulated by Walter that "There are but two fundamental requisites for a safe supply of parental fluid —an unlimited source of freshly distilled water and centralized responsibility for cleanliness in the preparation of the solutions and apparatus". The latter requirement is fulfilled in the manner described in the preceding paragraph. With regard to the former, Walter states that "singly distilled water from a still equipped with adequate baffles and traps or with a refluxing condenser is safe". No still answering this description was immediately available to us and the necessity for economy presented a major obstacle to the purchase of one possessing the necessary capacity to meet our requirements, which are relatively large. The ingenuity and services of the hospital engineer were of inestimable value in overcoming this and countless other difficulties before success was attained. An attempt was made to construct a suitable still for single distillation and, although this proved to be quite possible insofar as relatively small quantities of distillate were concerned, it was found, for reasons that will be made evident later, that all estimates as to required amounts of distilled water were absurdly small when compared to the quantity actually consumed with the method in full operation. On account of practical technical difficulties, it was found possible to construct a suitable still of adequate capacity and it was here that the resourcefulness and competency of the hospital engineer made it possible to obtain an almost unlimited supply of safely and freshly distilled water. As the method employed in attaining that end differs from that suggested by Walter and is unusual, it will be accorded a detailed description. It is undoubtedly practicable for a great many hospitals and its use should not involve any great difficulties.

The Still

The apparatus consists of a condenser capable of condensing approximately 150 lbs of steam per hour. The condensate is piped to a pyrex glass boiler heated by a monel metal coil. This boiler has a capacity of 50 lbs. of steam per hour, which steam is condensed in a glass condenser and is used exclusively for making up solutions. The excess condensate from the first condenser is piped to a storage tank and is used for washing flasks and glassware. The steam supply to the first condenser is taken from the steam main supplying the sterilizers in the operating rooms; this main is held at a constant pressure of 60 lbs., being reduced from 125 lbs at the boiler header.

The condensate from the glass condenser, as illustrated, is transferred as required to a separatory funnel by means of vacuum, and from this intermediate container is emptied by a trap for the making of solutions. This of course is an advantage in eliminating the handling of the distilled water.

Preparation of Solutions

Solutions for intravenous injection are prepared in the following manner, which is identical with that described by Walter.

A fresh stock solution is first prepared by adding distilled water from the separatory funnel to a given quantity

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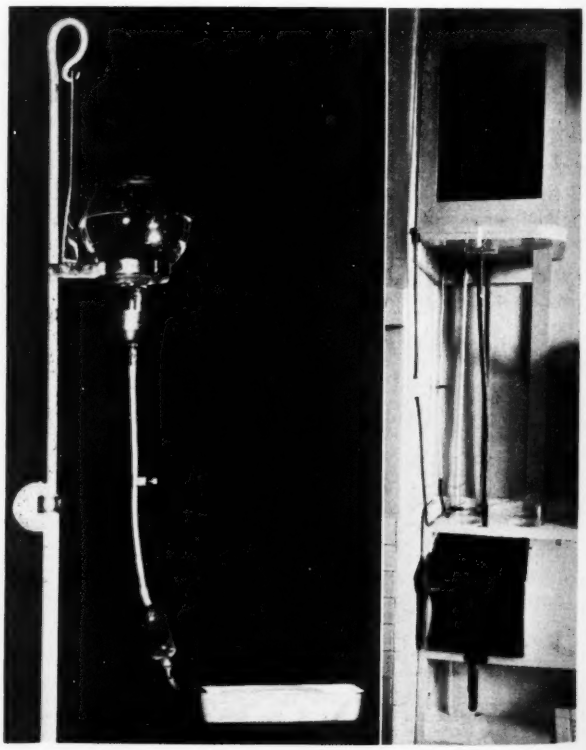
Left: 1500 cc. Flask suspended in split-ring bracket from gravity-stand, with vent-tube, intravenous tubing, stop-cock, "drip-tube", etc., all in place ready for administration. The lower portion of tubing to which is attached the needle-adapter and needle lies in the pan and is obscured thereby.

Right: Carboy reservoir above, enclosed in glass housing and connected with vat by special acid-resisting rubber tubing. Stainless steel vat below for reception of used cleaning solution.



of chemically pure sodium chloride or chemically pure dextrose, previously weighed out into a counterbalanced flask, until a predetermined net weight has ben reached. This flask is stoppered with a clean rubber stopper and shaken until solution is complete.

The concentrated stock solution of saline or dextrose is filtered through a Jena Glass fritted filter into 300 cc. burettes by means of suction.

A given quantity of either or both filtrates is measured into a previously counterbalanced flask, depending upon whether the solution being prepared is 0.85% saline, 5 or 10% glucose, in distilled water, 5 or 10% glucose in 0.85% saline, or etc.

Distilled water is then added to the counterbalanced flask from the separatory funnel until a predetermined net weight has been reached. This is easily performed by having suitable scales situated beneath the separatory funnel.

An especially designed rubber bushing is then fitted into the neck of the flask and, into a hole provided in the centre of this, is inserted about half-way, a stainless steel stopper with a channeled stem designed to permit the escape of steam and air during sterilization.

The solution is now ready for the autoclave where sterilization is effected at 250° F. for 15 minutes. At the end of this time, the steam is turned off, the valves closed and the autoclave allowed to cool slowly. When, in about 30-45 minutes, and without the autoclave having been previously opened, the temperature has reached 200° F., the flasks are removed, and the stoppers in the bushings are immediately pushed in their full distance, thus effectively sealing each flask until used. As is pointed out by Walter, these sterile, sealed, solutions can now be stored indefinitely without risk of impairment.

Cleansing is Important

The care and cleansing of glassware, rubber tubing and needles is a most important feature which, in our experience, is most satisfactorily effected by the methods to be described and which can only be entrusted safely to specially trained personnel, whose routine is standardized and uniform.

All glassware is washed in hot soapy water and rinsed thoroughly with cold tap water. It is then immersed in "cleaning fluid" which is composed of Potassium Dichromate 10% in Dilute Sulphuric Acid. This is contained for this purpose in pyrex bowls. The 1500 cc. pyrex intravenous solution flasks undergo the same treatment by being filled with the cleaning solution. All glassware soaks for 12 hours and the same cleaning solution is used repeatedly. That from the flasks is poured into a stainless steel vat and replaced therefrom into a carboy reservoir by means of suction. The connection between these two sites is made by special acid-resisting rubber tubing, and the carboy is shielded by a glass housing.

After soaking, the glassware, other than the flasks, is removed from the cleaning solution and rinsed thoroughly with a steady flow of singly distilled water. It is then placed for drying in a steam-heated cupboard at a temperature of 168° F.

The flasks, after having been emptied of cleaning solution, are inverted in a specially constructed monel metal rack, in which, beneath the neck of each flask, is a small jet. These jets are connected with a 40-gallon tank of singly distilled water. By means of 10 lbs. air pressure, this water is injected into the flasks through the jets in a stream of considerable force, each flask being washed by approximately five gallons of distilled water. The waste is caught in a gutter beneath the flasks and is piped off into a nearby sink. All flasks are used immediately after rinsing.

Care of Tubing

New rubber tubing is first treated by immersion in 5% sodium carbonate solution in the autoclave at 250° F. for 30 minutes. It is then rinsed with 1% hydrochloric acid, followed by distilled water. Particular care is taken to ensure that the lumen of the tubing is filled with the sodium carbonate solution during this treatment.

Subsequent care of rubber tubing after each use is carried out as follows. It is first washed well with hot soapy water which is circulated by means of a suitable syringe. It is then rinsed in cold tap water and each length is coupled to others by glass connectors. The tubing is then filled, by means of suction, with a 0.5% solution of Sodium Hydroxide and it is then also immersed in this same solution and is boiled for 45 minutes. This is effected in a tall enamelled can. After boiling, the solution is poured off and that remaining within the tubing is removed by suction. Distilled water is next run through the tubing for a full hour by connecting one end to piping connected to the condenser. At the end of this time, all water is removed from the tubing by suction. If the tubing is not sterilized ready for use in the sets within 12 hours it is again rinsed with distilled water.

Needles

All needles are washed in soapy water, rinsed first with tap water, then with distilled water and finally with ether. They are styletted during this cleaning which is done with a syringe. All are first carefully inspected and are, if necessary, sharpened, or "snag" points or faulty bevels corrected by means of a small electric needle grinder. It has been found in our experience that gauges 19, 20 and 21 are the most satisfactory.

Preparation and Use of Sets

The necessary equipment for the administration of any intravenous solution in this hospital is assembled into "sets", which, together with one or more flasks of the required solution, are distributed in the manner described below. Each "set" contains one towel, one enamelled medicine cup, four swabs, two needles of different gauge (without stylets) and contained in a stoppered "hour-glass" container; a standard length of intravenous tubing, complete with "vent tube", stop-cock, "drip tube" and needle adapter, the latter all assembled together ready for use.

These sets are autoclaved at a temperature of 250° F. for 15 minutes, after having been placed in a special aluminum pan which is enclosed in a muslin envelope.

When any given intravenous solution is ordered on the ward, the order form is taken by the nurse to the central supply room where she receives a tray with the required solution, an administration set, a split-ring bracket for supporting the intravenous flask on the gravity stand, and a check number. The latter are numbered brass tags

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Standardisation de la Comptabilité des Hôpitaux

Par R. LAPORTE, Administrateur
Hôpital Notre-Dame, Montréal

SERA-T-IL possible un jour d'établir le coût réel et uniforme d'une journée d'hospitalisation? Ceci est très douteux, ce problème étant des plus complexes.

Depuis quelques années, cette question est revenue très souvent à l'ordre du jour. Des comptables, experts en la matière, l'ont étudiée, et ont offert des suggestions qui ont paru établir des bases permettant la comparaison des chiffres publiés par les différentes institutions hospitalières.

Un grand nombre d'administrateurs, toutefois, ont rejeté les données de ces experts, et pour plusieurs raisons. Dans certains cas, la mise en pratique des suggestions faites était impossible, dû au système de comptabilité en usage. D'autres ont prétendu que les modifications qui s'imposeraient-eraient un obstacle à la comparaison des bilans futurs avec ceux des années passées, et bien d'autres raisons plus ou moins admissibles.

Il semblerait donc que les recherches faites et les travaux préparés jusqu'à date, ne donnent pas les informations et la possibilité de réforme voulues.

Mr. R. Laporte.

Dépréciation

Certains hôpitaux, alors qu'ils établissent le coût d'hospitalisation, prennent en considération leur réserve annuelle au compte "dépréciation"; d'autres l'omettent. Les deux opinions sont discutables. Il faudrait, cependant, s'accorder sur ce point, si l'on désire établir un système uniforme de comptabilité.

Nous citons l'opinion de monsieur Herbert-R. Sands, C. P. A., dans un article intitulé "Accounting and Business Procedure for Hospital", travail préparé pour et à la demande de "The Duke Endowment Hospital Section", Charlotte, Caroline du Nord, qui se lit comme suit:

> "La dépréciation sur les immeubles doit entrer dans le chapitre des dépenses courantes, et doit se continuer pendant toute la durée ou la vie des immeubles. Toutefois, dans le cas d'un hôpital, cette réserve ne devrait pas être prise en considération, étant donné que les hôpitaux sont en réalité des organisations opérant sans profit, clôturant chaque par un déficit. Il est donc illogique de détourner une partie des revenues ordinaires d'un hôpital, dans le but d'établir un fonds de "dépréciation".
>
> L'auteur ajoute, à l'appui de sa théorie, que:
>
> "Les générations passées et présentes ont été appelées à bâtir et à équiper les hôpitaux actuels; il semble équitable que les générations futures en fassent autant".

Monsieur C.—Rufus Rorem, Ph. D., C. P. A., président du comité des aviseurs, section de la comptabilité de l'American Hospital Association, donne l'opinion suivante sur le chapitre "Dépréciation":

> "En ce qui concerne les immeubles et l'équipement des hôpitaux, sections servant aux fins hospitalières, la dépréciation ne doit pas entrer en ligne de compte, les administrateurs devant se rappeler que la dépréciation, d'une manière générale, ne peut être considérée comme coût d'opérations de l'hôpital qui a de fait été bâti et équipé à même les fonds publics et les dons particuliers mis à sa disposition par les générations passées et présentes".

Monsieur Rorem ajoute:

"Il existerait trois raisons motivant l'établissement d'un fonds de "dépréciation" dans la comptabilité des hôpitaux; ce sont les suivantes:

(a) La compilation complète du bilan du coût des opérations;
(b) Un moyen adéquat d'établir un rapprochement avec les bilans publiés par les autres institutions; et
(c) Un endroit où grouper la réserve pour dépréciation, qui, autrement, pourrait être distribuée dans les différents comptes, à la discrétion de certains administrateurs".

Il soutient, toutefois, que cette réserve ne devrait pas entrer dans le coût des opérations.

Un travail considérable a été fait par le The Canadian Hospital Council, depuis quelques années, en vue de populariser la standardisation de la comptabilité dans les hôpitaux. Un comité d'étude, ayant comme président le révérend Père Verreault, en collaboration avec le Service des statistiques du Dominion, à Ottawa, prépara un plan uni-

rorme qui reçut l'approbation du Ministre de la Santé, et qui, plus tard, fut accepté par les provinces suivantes: Colombie Britannique, Saskatchewan, Manitoba, Ontario et Nouvelle-Ecosse. Le Conseil espère que son programme sera également accepté par les autres provinces, dans un avenir assez rapproche.

Le comité d'étude sera en mesure de faire des révélations très importantes, lors de l'assemblée du Conseil des hôpitaux, qui aura lieu en septembre prochain.

Considérant que la dépréciation sur les immeubles n'est pas uniforme, variant avec chaque institution, ne serait-il pas préférable, en vue de la solution de ce problème, de faire une charge annuelle de 2% sur la valeur des immeubles telle qu'elle apparait aux livres? Il est évident que cette valeur existe dans le cas de tous les hôpitaux,sans exception, que la somme entière ait été passée à "dépréciation" ou non, selon le nombre d'années d'existence des immeubles.

Salaires et gages

Le chapitre "Salaires et gages" est un facteur très important contre l'établissement d'une comptabilité standardisée, étant donné l'écart énorme qui existe entre les différentes institutions hospitalières.

Pour les fins de notre enquête, nous prenons en considération les institutions de même classification hospitalière, et nous trouvons qu'il existe trois catégories distinctes, à savoir:

(a) Les institutions religieuses;
(b) Les institutions semi-religieuses;
(c) Les institutions laïques.

Il est évident que les institutions exclusivement religieuses n'ont pas à faire face aux mêmes déboursés que les autres, en ce qui concerne les gages à être payés: ceci est de nature à renverser les calculs et à donner une fausse impression touchant le coût d'opérations.

Pour répondre à ces objections, il y aurait lieu d'établir une échelle bien déterminée et uniforme des salaires se rapportant à chaque catégorie d'employés des hôpitaux.

Dans les institutions essentiellement religieuses et qui ne sont pas appelées à payer de salaires à leur personnel, le tarif fixé en vertu de l'échelle uniforme serait inclus dans le compte "opérations", quitte à être passé au crédit d'un compte spécial, à la clôture des opérations, à la fin de l'année fiscale.

En plus d'établir le coût d'opérations pour les fins de la comptabilité uniforme, cette façon de procéder serait d'une aide appréciable aux hôpitaux de la province de Québec, en leur permettant de résoundre le problème des salaires des employés des hôpitaux, qui, jusqu'à présent, n'a pas été réglé par nos gouvernants.

Dette obligataire

Les intérêts sur obligations, dont le montant varie avec chaque institution, sont une des principales causes de déséquilibre dans les différents bilans. Certains hôpitaux ont dû reconstruire, il y a quelques années, et, nécessairement, les intérêts à payer sont beaucoup plus élevés que dans le cas des hôpitaux qui n'ont pas été appelés à faire de changements radicaux dans leurs immeubles. Il y a aussi le cas des hôpitaux qui n'ont pas de dette obligataire.

Ecole des gardes-malades

Il ne faut pas oublier les dépenses énormes occasionnées par une école de gardes-malades. Certains comptables établissent le coût d'entretien à $800.00 annuellement par élève, prenant pour acquit que ces dernières sont logées dans une résidence moderne, et jouissent de tous les autres avantages inhérents à leurs conditions sociales. D'autres autorités prétendent qu'il est possible de maintenir une école de 200 élèves, au coût de $55.00 annuellement par élève.

L'écart des dépenses provenant du maintien d'une telle école d'une part, et le coût relativement bas pour certaines institutions où les élèves logent dans une partie de l'immeuble non utilisable pour fins hospitalières, est considérable. Toutefois, le coût du maintien de lécole des gardes-malades, dans les deux cas, entre dans le compte "opérations".

Citons, ici, un plan idéal qui semblerait être un pas de fait vers l'uniformité que nous préconisons: nous voulons dire une école entièrement séparée de l'institution hospitalière dont elle dépend; une école qui se suffirait à elle-même. Le plan pourrait fonctionner de la manière suivante: d'un côté, un loyer équivalent au coût de 4%, par exemple, sur le placement; plus 2%, représentant la dépréciation sur l'immeuble, et 10% par année, couvrant la dépréciation sur le contenu.

Pour illustrer ce problème, servons-nous des données se rapportant à une école de 200 élèves, et d'un placement de $500,000 (immeuble seulement); l'équipement aurait une valeur de $75,000.

L'école serait appelée à payer un loyer de 4% sur le placement ($575,000), soit, $23,000; plus 2% sur le coût de l'immeuble, $10,000), soit, $23,000; plus 2% sur le coût de l'immeuble, $10,000, représentant la dépréciation, et, disons, 10% sur l'évaluation du contenu, soit, $7,500—un total de $40,500 ($3,375 par mois).

Les revenus consisteraient en salaires que l'hôpital serait appelé à payer à l'école, en échange des services hospitaliers rendus par les élèves. Les salaires pourraient être évalués comme suit:

Pour 33 1/3 du nombre total, représentant les 66 élèves de troisième année, l'école recevrait $40 par mois; pour les 66 élèves de deuxième année, $30 par mois, et pour le même nombre d'étudiantes de première année, $20 par mois, soit, $31,680, $23,760 et $15,640 respectivement—un total de $71,000 par année, laissant un excédent de $30,500. Aucune rémunération ne serait payée aux élèves pendant leurs cours, et, en plus, un droit d'admission serait payé aux élèves pendant leurs cours, et, en plus, un droit d'admission serait exigé de chaque aspirante.

Considérant que 66 entrées seraient faites chaque année et que le droit d'admission pourrait être fixé à $100, l'école augumenterait son surplus à $37,100; ce montant étant suffisant pour défrayer le coût de la nourriture, de l'électricité et des gages payés aux femmes préposées à l'entretien.

Jour d'hospitalisation

Pour terminer nos remarques sur le coût d'hospitalisation, il y a lieu de citer les différents modes qui existent dans le calcul des jours d'hospitalisation.

Considérant qu'un recensement fait il y a quelques années dans 54 hôpitaux de la ville de New-York, a démontré qu'un système personnel existe dans la plupart des hôpitaux, il est à souhaiter, en vue de rendre la compta-

(Continued on page 44)

Points of Importance in Doing Medical Legal Autopsies

Some Hints from a Chief Coroner*

By SMIRLE LAWSON, M.B. (Tor.) M.R.C.S. (Eng.)
Chief Coroner for the Province of Ontario and the City of Toronto

THE physician who undertakes a post-mortem assumes a serious responsibility. He must be fully prepared to meet the various contingencies that may present themselves, and he should execute his work thoroughly and with strict impartiality. To do this he should be an expert anatomist and pathologist and a close and careful observer.

The post-mortem should be made on the first day subsequent to the death, but it should never be declined on account of the interval that may have elapsed, not even if the body be in a state of putrefaction.

The examination should be made by daylight, since artificial light conceals shades of colour which it is important to recognize, such as stains by nitric acid. Analytic and microscopic investigations are needed in many cases, and great care should be taken to place all organs which are to be examined for poison in separate clean jars. Many physicians will thoughtlessly place several abdominal viscera, such as liver, kidney and stomach, in one jar. This is highly objectionable, since it deprives the chemist of all opportunity to determine if the poison has been absorbed during life—a most important point.

The examination should be exhaustive, so that the examiner may be able to testify with some positiveness as to the cause of death. For example, the discovery of a disease of the heart sufficient to cause death should not preclude an examination of the lungs and brain, in either of which the real cause of death may be found. Poison in the stomach may co-exist with a ruptured aneurysm, a clot in the brain, or a diseased heart. The examination should be conducted methodically, and all details recorded.

The clothes should be carefully examined to determine whether torn or cut and whether any torn fragment corresponds with the garment of the accused, or of the deceased; whether marked by blood-stains, or by an acid; if stabbed, whether the cuts correspond with the wounds on the body. If examinations are to be made for blood stains on the clothing of the body or on any surrounding objects, these should be marked, wrapped up and preferably removed from the room or immediate vicinity of the body before the post-mortem begins, thereby avoiding the suspicion that the objects had become blood-stained during the post-mortem, which would destroy the value of any evidence adduced by future examination.

The clothes should be removed, and the body minutely inspected. It should also be identified if possible. Note should also be made of the sex, height, weight, age, and general development; of scars and other marks; abnormalities; blood, seminal and other stains; the colour of the skin and the condition of the eyes and teeth; the temperature and rigidity of the body; the degree of putrefaction; lividity and ecchymoses; matter flowing from the nose, mouth and ears (blood from or in either of these orifices is often indicative of fracture of the skull); state of the tongue and the expression of the countenance. The hands should be inspected to ascertain if they held a weapon—whether loosely or tightly grasped; note if portions of hair or clothing are firmly held (denoting a struggle), and whether these articles correspond with those found on the prisoner; whether stained with blood or blackened with powder (the latter indicating firearms). The presence or absence of foreign bodies in the nose, mouth, anus and vagina should also be noticed.

All wounds should be carefully examined as to depth, extent and direction, and whether they suit the weapon that may be supposed to have occasioned them; the condition of their edges as indicating whether recent or not; marks of inflammation, suppuration or gangrene; whether any foreign body be present, such as a ball, fragment of clothing, etc. The scalpel may be used, if necessary, to enlarge the wound, but care must be taken not to interfere with its original character. If there is contusion without solution of continuity, the examiner should not fail to look for internal injuries.

In fractures and luxations, notice their condition and that of the surrounding parts. In cases of burns, observe their degree and extent, whether they are merely inflamed or vesicated, and the state of the adjacent parts.

In females, examine the genital organs, especially in case of alleged rape, pregnancy and recent delivery.

In the case of new-born children, ascertain their length and weight, colour, sex, diameters of head, the condition of the lungs, hair, nails, membrana pupillaris, genital organs, and the condition of the umbilical cord. The question of a live birth will be treated more fully in a later part of this work.

The more modern methods of photography permit valuable pictures to be taken, so as to preserve accurate evidence of the surroundings and position of a body.

The Thorax

The costal cartilages, together with the sterno-clavicular ligaments, should be carefully divided, avoiding the large veins in the neck, the pericardium and its contents; the sternum is now reflected. The thorax should be opened with care and the various structures carefully examined. Look for adhesions. Note the char-

*From an address delivered at the Convention of the Ontario Hospital Association, Toronto, November, 1938.

acter and quantity of the pleural and pericardial fluids; note the condition of the heart as to distention of cavities. Open the heart in situ; note in detail the contents of the cavities. Is the blood fluid or in clots? Are the clots white, black, or red? This is important, as it may establish whether the death was sudden or prolonged. If the right side of the heart contains distinct ante-mortem clots, it is highly improbable that the death could have been sudden, as by drowning.

The ribs should be examined in succession for evidence of fracture or other injury.

In case of suspected poisoning, the oesophagus should be ligated at the cardiac end of the stomach to prevent regurgitation of the gastric contents; the oesophagus may be opened down to the ligature, and its interior examined for corrosion or other evidence of poison or injury.

The Abdomen

The organs of the abdominal cavity are to be examined next. If any urine .be present in the bladder, it should be carefully preserved in a chemically clean bottle, that it may be examined for albumin, sugar, or for poison; in the latter case some of the alkaloidal poisons (atropin, strychnin, etc.) can be physiologically tested for by injecting some of the suspected urine hypodermatically into susceptible animals, or by chemical examination. The internal and external genital organs are to be examined, and, in the female, examine the uterus for evidence of pregnancy, abortion or delivery.

The Stomach

The stomach should be examined by first ligating it at the cardiac extremity, and then by applying two ligatures at the pyloric end and cutting between the latter. After opening it along the lesser curvature, examine the contents, as to quantity, character, odor and reaction. Carefully inspect the lining membrane with the lens for solid particles of phosphorus, crystals or patches of arsenic, or other mineral poisons, fragments of leaves or seeds, or other foreign matters. Note any evidence of inflammation or ulceration. If an analytic examination of the stomach and its contents is to be made, it is better if it can be so arranged that the stomach be not opened until it be delivered to the chemist.

The Intestines

In cases of poisoning, the stomach and its contents should be preserved for chemical examination in a separate jar. The intestine also (at least a portion of the small and large bowel, together with the rectum) and portions of the liver, one kidney and the spleen should be kept for a similar purpose. The jars containing the viscera should be securely stoppered and sealed with the private seal of the examiner, with a label affixed stating the name of the deceased person, the date of death and of the autopsy. They should then be delivered personally, by him, to a responsible party, from whom he should always take a written receipt. The preservation of each organ in a separate and well cleaned—preferably new—jar is to be specially urged. Toxicologic examinations are often seriously hampered by the fact that stomach, liver, and kidneys have been placed in one large jar. Such a condition prevents determining the ante-mortem distribution of the poison.

The Head

After a careful external examination for wounds or injuries, for which purpose the hair may have to be removed, the scalp should be separated from the skull and a search made for fractures; do not mistake irregular sutures for fractures. Blood along the line of a suture can be wiped off, along the line of a fracture it cannot; gentle tapping on the bare skull may give a "cracked pot" sound in fracture. Notice any unusual thinness of bone; follow out any fracture to its whole extent; observe any extravasation of blood under the scalp.

The Neck

The neck should be inspected for marks of violence by the fingers (garroting) by a cord (strangling or hanging) and for ecchymoses. Note should be taken as to the condition of the great vessels and nerves. The cavity of the nose and mouth should be examined; also the condition of the larynx, trachea, pharynx and oesophagus.

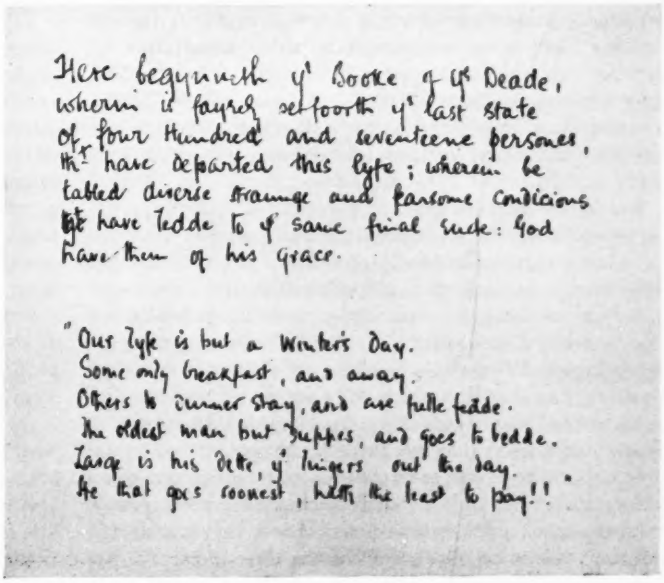
In case of dis-interment of a body the inspectors should always view it before it is removed from the coffin; at this time, also, it should be properly identified by the friends or relatives of the deceased.

In all cases it will be expected that a report should be forwarded on the regular form containing opinion as to the cause of the death. The length and character of this report will depend on circumstances.

Ye Booke of Ye Deade

When Dr. John McCrae, poet and soldier, and author of the most widely known of war poems, was pathologist to the Montreal General Hospital, he inscribed the accompanying notation and verse on a blank page of the hospital autopsy book for 1902-03. In view of the many great achievements in his all too short life and his international reputation, this blank page of the old autopsy book is worthy of museum status.

At right—Photostat reproduction of the central portion of a blank autopsy page.


Here begynneth ye Booke of ye Deade,
wherein is fayrely set foorth ye last state
of four Hundred and seventeene persones,
wch have departed this Lyfe; wherein be
tabled diverse Straunge and fansome Condicions
yt have ledde to ye same fynal ende: God
have them of his Grace.

"Our Lyfe is but a Winters Day.
Some only breakfast, and away.
Others to Dinner stay, and are fulle fedde.
The oldest man but Supps, and goes to bedde.
Large is his Debte, yt lingers out the day.
He that goes soonest, hath the least to pay!!"

Obiter Dicta

Human and Humane

"IN the Army just as much attention is paid to the second line of defence as to the first. Many hospitals have paid too much attention to the first line and have forgotten the second line in the kitchen, laundry and power house." (*Hospitals*, April, 1939)—How true of so many of our own hospitals.

Behind the scenes and "below the decks" in every hospital is a small but important army of men and women who make a living by contributing their part to that intangible service we call patient care.

They are the lay personnel of every hospital in the land. They are the women of the dietary department, the housekeeping service, the laundry, linen room and sewing rooms. They are the technicians of the x-ray department, the laboratory and therapy services. They are the men of the engineering crew who keep up the steam for heating, cooking and sterilizing, and maintain adequate refrigeration for the protection of perishable foods and the provision of patient comfort. They are the orderlies. They are the men of the maintenance crew and men-of-all-work who keep the hospital in ship-shape day after day . . . the men and women who, at a moment's notice, are ready and willing to do anything that is needed in the complex functioning of our hospitals.

Much has been said and written about the devoted and willing service of doctors and nurses; and the importance of their role is well understood and appreciated, but in placing emphasis on this one group we seem to have entirely overlooked another great body of hospital workers who are contributing every hour of every day to the patients' well-being and comfort—our "second line of defense", the men and women the patient seldom sees as they move about their appointed tasks, modestly supplementing the work of the doctor and nurse to complete a smoothly organized pattern of care and service around every patient.

But these workers are not automatons, they are intensely human. In most hospitals the majority of them have been with the institution for many years, or at least long enough to have come to realize that it is a very special type of work in which they are engaged and are always ready to respond to the demands made upon them accordingly. With these workers, if they are the right type—and most of them are—it is not just a wall that has to be washed, but a wall that must be clean and sterile. It is not just a meal that has to be prepared, but a tray set up to appeal to a languid appetite. It is not just a gown to be mended but a garment in which some restless person must lie. Such a sense of responsibility is very wonderful, but they cannot be idealists all of the time and it will pay every administrator to get a little closer to this second line of defense; to learn a little more about each individual employee; to ascertain if he can why this one and that one came into and stays in the hospital world. Few of them may be able to provide an adequate answer but we all know that the appeal isn't money or short hours or a soft job. Maybe it is pride in the part they play in the humane work of relieving distress and saving lives.

So, let us not forget that while the role of a hospital fundamentally is humane, it is also human and is being manned by individuals with desires, ambitions, dreams and ideals, who are just human enough to appreciate humane treatment. Let's look over our "second line of defense".

C. I. F.

The Anaesthetic Department

HOSPITALS all over the country are much better organized now than they were a few years ago. The medical staffs in these hospitals are no exception to the rule. In a majority of all but the smallest hospitals reasonably good organization has been effected, particularly of the surgical and obstetrical services. While there are many examples where the staff organization still shows weaknesses and leaves much to be desired, most of our general hospitals have reasonable control of the work done and a surprisingly large number of even the hospitals in the smaller medium sized bracket have facilities for making available to patients expert knowledge and modern facilities in most of the specialities.

The anaesthetic arrangements in all too many hospitals, however, are lamentably weak. Except in our larger hospitals there is seldom a properly organized anaesthetic department. There is usually no official anaesthetist, or, if there be one, many of the doctors do not avail themselves of his services. In so many communities, the doctors work in pairs, one giving the anaesthetics for the other's surgery, the rôles frequently alternating with succeeding cases. Many a young doctor has taken special training in anaesthesia and then found it impossible to break through this custom. The sad result of this situation is that in all too many communities, the patients are denied the benefits of the modern types of anaesthesia—nitrous oxide, cyclopropane and other gases and anaesthesia by the spinal, intravenous, intratracheal or rectal routes. In a surprisingly large number of smaller hospitals, gas equipment has been purchased and practically never used, nearly all anaesthetics still being of ether, ethyl chloride and chloroform administered by the old mask and towel method. Obviously this is very unfair both to the patient, whose chances of recovery and whose comfort are lessened

thereby, and to the surgeon who must work under a greater handicap.

The anaesthetic facilities and arrangements in every hospital should be carefully organized. The patient has a right to expect the safest and most satisfactory anaesthetic which the facilities and personnel of his community can make available. It is idle to expect a hospital to purchase the latest in equipment, if there be no person qualified to use it. It is discouraging to say the least for a doctor to take time off to go away and study the newer methods unless he can be assured that he will be given a reasonable share of the anaesthetics upon his return. A hospital cannot expect to get interns unless it is prepared to give them proper training in anaesthesia. Moreover, in all too many hospitals there is no supervision and checkover of anaesthetic equipment and regulations. No rules may have been set up, or if set up are not observed, respecting inspection, maintenance and grounding of equipment, control of static in the apparatus, use of the cautery with ether, humidification of the atmosphere especially in winter, smoking, etc. Only a trained anaesthetist can safely advise on these points.

Obviously the fundamental factor is the economic one. Smaller hospitals cannot supply enough work for a full time anaesthetist. The public has been educated to pay for surgery but not for general medicine nor for diagnosis; hence the general practitioner feels that he cannot afford to turn over the anaesthetic to some one else. Despite these difficulties, however, much could be done. If a full time anaesthetist cannot be utilized, his services might be shared between two nearby hospitals. In the interests of their patients, staff members might make greater efforts to make it worthwhile for one of their number to specialize in anaesthesia; rising standards for surgery are gradually breaking up the old system of "pairing off". Even if there be no assurance of widespread staff support a young doctor may feel justified in making himself proficient in anaesthesia for the better results obtained by him will, sooner or later, bring demands for his services from both surgeons and patients. Better organization of the anaesthetic department is long overdue.

How Correct are Statistics?

IT is common knowledge that some children are born, what might be called, "in transit"; for example, in automobiles, trucks, sleighs and on trains. In the majority of these cases the mother is taken immediately to the nearest available hospital. The child was not born in a hospital and was not born in a domicile.

In view of the increasing interest being taken in the question of maternal and infant mortality it would be interesting to know how these unusual occurrences are taken care of in our vital statistics branches.

In one Province where a mother gave birth to a child in a taxi-cab on the way to the Maternity Hospital, the Health Officer of the Province was requested for a ruling as to how this should be recorded in the hospital's statistics. His answer was both humourous and informative as follows:

"Your note of the 1st instant re taxi-cab birth received. I think it was very inconsiderate on the part of the mother to mix things up in this way.

"Our diagnosis is that this baby was born in a public place and is not chargeable to the hospital. However, in order to straighten out as far as possible the records for future consultation an addenda might be added to the mother's history and the home address, if any, should be written on the birth registration."

It would be interesting to hear the views of others as to how this problem is being met.

Scientific Purchasing

THE value of scientific purchasing needs no elaboration. It is one of the most effective means of expense control. In one institution of a little over 100 beds the expenses exclusive of salaries during a twelve month period were reduced by seventeen per cent (17%), compared with the previous year, based on the same number of patient days. This was directly a result of systematic effort in buying.

The following are factors which were responsible for making this saving:

1. Centralized purchasing.
2. Avoidance of the patronage system in buying.
3. The manufacture of pharmaceuticals and other commodities in the hospital.
4. Consultations on buying with purchasing agents of other hospitals.

Centralized purchasing is recognized as the only system whereby the hospital dollar can be properly controlled. Prior to the present administrative setup, the dietitian was expected to buy all provisions for her department. Not being conversant with market conditions she did not always get the best value for the money spent. Purchases were even made from a retail store and commodities, such as vinegar, ketchup, cheese, etc., were bought in small quantities from this source. Other groceries were bought through a wholesale firm without obtaining competitive prices. This procedure also applied to the meat purchases. In one year a saving of approximately $3,500 was made in this department. The results obtained in other departments through centralized purchasing were also substantial, although perhaps not so spectacular.

Business men in the community so often try to bring pressure to bear on the members of the Board or the Superintendent of the hospital, insisting that they should be entitled to at least a portion of the hospital's business, regardless of price. If they would stop to think, they would realize that any saving which the hospital makes through competitive buying can be put back into service, which is beneficial to the community as a whole, whereas if the patronage system be followed only a chosen few benefit materially. There appears to be no limit to the pharmaceuticals and other commodities that can be manufactured or compounded within the hospital. This includes disin-

(Continued on next page)

Graduation Day

TO the nurse, perhaps more than to any other person graduating from a specialized professional course, "Graduation Day" holds a special significance. It is doubtful if in any other course of professional training the young student must undergo such a rigorous combination of academic and practical preparation. To her the receipt of the graduation pin and parchment and the right to wear the black band of the full-fledged nurse mark the greatest moment of her professional life.

To the hundreds of young women graduating this month and next, we offer our most sincere congratulations. We wish you the greatest of success and happiness in your chosen career. You are entering the nursing profession in one of the most important decades in its entire history. All branches of the healing arts are vitally concerned with the definite evolution now taking place in our methods of preventing and curing disease and of financing the burden of illness. The principles to determine the future of the nursing profession are being crystallized today. The welfare of the nurses of tomorrow and of the patients whom they will serve will depend in large part upon the intelligent leadership given by the present generation of nurses, of which generation you are shortly to become a valued member. You owe your profession a distinct responsibility to give these questions of today your most intelligent thought and consideration.

Scientific Purchasing

(Continued from preceding page)

fectants, elixirs, syrups, ointments, paint, ink, insecticides, furniture polish, scrubbing and dish washing compounds, etc. As a result prices on some articles can be reduced by varying amounts, even up to eighty per cent.

Too much emphasis can not be placed on the importance of consulting purchasing agents of other hospitals, particularly within the province.

It would be advantageous to have a Round Table Conference for purchasing agents at the provincial conventions with the object of actually comparing prices and standards in quality of certain commodities as well as the best source of supply. It has already been suggested by hospital authorities that the formation of a local or district Hospital Council would be advisable in certain strategic areas. As a matter of fact this has already proven quite successful in some parts of the United States and Canada. The results obtained through conferences of this kind would be of incalculable value to all concerned.

—Gordon Friesen.

Extension Course in Hospital Administration

Following the extension course in Hospital Administration given at Toronto, last December, by the School of Nursing, University of Toronto, to graduate nurses, there was increased demand for further work in this subject. A course of three weeks' duration has therefore been arranged for November 6th to 25th, 1939. This allows for dealing with the subject in a somewhat fuller manner. Authorities in hospital administration will discuss problems of organization, finance, maintenance, departmentalization and relationships; and discussion periods will be arranged on these topics. Dr. Malcolm T. MacEachern of Chicago, and Dr. Harvey Agnew have already been secured as lecturers at this course. Outstanding nurse administrators will also contribute.

Branch of the Associated Medical Services to be Established in Hamilton

The Hamilton Academy of Medicine, Hamilton, Ontario, has decided to establish a branch of the Associated Medical Services, in that city.

An Address to a Graduating Class of Nurses

By JOHN FERGUSON, M.D., F.R.C.P. (C)
Toronto

(Continued from April issue)

Character

NURSING is vastly more than bandages, thermometers and hypodermic syringes. Emerson said: "Character is more than intellect. A great soul will be strong to live as well as to think. Goodness outshines genius." We admire the scholar, but we revere him whose intellect is clothed with goodness. Tennyson struck a fine note when he tells us that: "Self knowledge, self reverence, self control,—these three lead on to sovereign power". Character is a matter of disposition, not of intellectual ability, and none are truly great who are not good. Real character can best, indeed usually, only be developed by following the occupation most congenial. If a nurse aims to attain the maximum degree of success, she should seek out the line of work she likes best, and thereby combine happiness with culture. The forces that enter into the building of character are the external world, temptation, newness, zest, responsibility, contrasts, extremes, friendships, grief and trials. But be of good cheer for there is no limit to the growth of character, and herein it differs from intellect. Shakespeare has said:

"The purest treasure mortal times afford
Is spotless reputation; that away,
We are but gilded loam or painted clay."

Charles Dana Boardman evolves character thus: "Sow a thought and reap an act; sow an act and reap a habit; sow a habit and reap a character; sow a character and reap a destiny".

Loyalty

Let me here emphasize the word *Loyalty*. Once a nurse has taken charge of a patient, she is, like the doctor, obligated to render the best service that comes within the range of her powers. After nearly sixty years of experience, I have observed the unfortunate effects of a change of nurse at a critical stage of a case. When a patient has become acquainted with a nurse and has come to have confidence in her, she should not withdraw from the case, except for the weightiest of reasons. Let the words of Caesar be your motto:

"I am constant as the northern star,
Of whose true fix'd and resting quality
There is no equal in the firmament."

Firmness

No nurse can afford to neglect attention to the words courage, will-power and decision. Circumstances will arise when the nurse must decline to yield to the whims or fancies of patients. She must also take control of the ward or room, in matters of ventilation, temperature, visitors and quiet. Shakespeare, that great master of thought and language, said: " 'Tis self-control that makes her seem divine".

May I be bold enough to invite your attention to another important influence that all nurses should support—the various nursing associations. The mingling with each other is one of the most enjoyable and effective ways of adding to your own storehouse of knowledge. Reading makes one learned, writing makes one accurate, but conversation makes one cultured.

"All that mankind has done, thought or been is lying as in magic preservation in the pages of books. They are the chosen possessions of men." In these terms Carlyle praises books. A most useful accomplishment is to be a pleasing reader. Every nurse should cultivate the art of reading with a clear and musical voice. In reading to patients, nurses should read rather slowly, as patients are, in most instances, unable to follow rapid reading. Nurses should also cultivate a soft speaking voice, preferably contralto; in any event, they should avoid the high-pitched, shrill tones. It is very essential that nurses read the current news of the day in order to keep their patients informed about the timely happenings. Every nurse should be scrupulously careful to select such topics as will be agreeable to the patient. Care should be taken to avoid accounts of unpleasant events, or of an exciting nature. Sporting news for some, society news for others, a nice bit of humour for a third, and, perhaps, some politics may be in order for those who have taken an interest in public questions.

It is recognized by all that nurses ought to keep their *professional education* up to date. And here let me say that every nurse should keep a scrap-book in which should be filed away clippings of interest and value on the care of the sick. Such a book will become a most treasured possession.

Every nurse should give some study to *psychology*. On this subject there is one volume, "Textbook of Psychology", by Maude B. Muse, R.N., A.M., which I can confidently recommend.

The Ethics of Nursing should receive consideration. When one takes the trouble to read such a book on ethics, as the one written by Mary E. Gladwin, R.N., Ph.B., LL.D., the importance of the subject becomes apparent. It is excellent to have knowledge, but it is very essential to have a well-balanced conduct; for "conduct", said Arnold, "is three-fourths of life".

Nurses should read regularly some good journal on nursing. In this way only is it possible to keep abreast of the progress made. Goethe put the matter well when he said "We must daily conquer things anew". It is so easy to forget and so necessary to fill up the blanks, and to add that which is new.

Chambers' Cyclopaedia of English Literature is a veritable storehouse of knowledge of a most delightful character, and will enrich the minds of all who read it. It is most important we should know something about the noted

men and women who have written our books and poetry, with many specimens of what they did write.

Such publications as the various "Digest" booklets place in our way much valuable information in brief form. Some knowledge of the history of our country is also advisable, and, for this purpose, the recent book by Prof. Wrong, on the History of Canada, is excellent. A one-volume book on the General History of the World, such as the work by Wells, will meet the needs very well, and prove to all thoughtful nurses interesting and educative. An interesting book is the one written by Will Durant on the History of Philosophy. It is a fascinating subject to learn how the great thinkers of the world arrived at their opinions and what these opinions are.

There is a vast amount of reading under the general title of fiction—the novel and romance, but of fiction it must be remembered that most of it, especially romance, has a circumscribed local interest, or is on topics of a passing nature, or deals with events of some family of no historical note, or sets out to advocate some theory of religion or to present a distorted picture of some historical event. The writing of fiction, for the past fifty years at least, has become too seriously commercialized. While a certain amount of pleasure can be derived from the reading of a well written novel, education, in the proper sense, cannot be secured by the perusal of such books. Indeed, it may be said that the more of such books people read the farther away they are from a sound education.

There is, therefore, a definite tendency in fiction to present a somewhat distorted view of religion, philosophy, sociology, morals, politics, conduct, history, and scenery; and, as a result, fiction creates, at its best, an unsound form of education. But I do not condemn all fiction. There is a certain amount of fiction from our best writers that is valuable and praiseworthy, and tends to stimulate the mind of the reader, and broaden our ideas about men and things in general. My last word is choose carefully, select from the best authors, keep to the historical novel and avoid the seasonal romance, or what is called the "pot boiler".

As a contrast, one reads Miss Mulock's, "John Halifax, Gentleman", and, when finished, the thought remains that the story will never die. It gives an account of the building of a noble character; so it can be said of Kingsley's "Alton Locke", and Shakespeare's immortal dramas.

I have kept for my final reflections on reading, two books, Shakespeare and the Bible. The most noble book on the study of human nature that has ever been written was given to the world by Shakespeare. His dramas are a profound study of psychology, and his knowledge of human nature was almost supernatural. He contrasts good and evil with the power of a master mind, bringing rewards to right and punishment to wrong.

The Bible is a book of books. Its origin differs from all others; for the mind of the Creator was guiding its composition. In the Old Testament, I would urge nurses to read Deuteronomy, as it gives the seven great speeches of Moses; Ruth, as therein you have a most beautiful story of love and loyalty and the blending of the Jew and the Gentile; Esther, because therein you read of one of the noblest of womankind; Ecclesiastes and Proverbs, because of the sublime wisdom they contain; Job, for therein you have the Creator and Satan taking part as supreme actors, and Job on trial as representative of the human race; the Psalms, the collection of sacred poetry; and Isaiah, the prophet of Christ. In the New Testament read Matthew, Mark, Luke, John, the Acts of the Apostles, and Corinthians. Store your minds with what you find in the portions just mentioned, for they alone can tell you of:

"The one far-off divine event
To which the whole creation moves."

The last work of the Creator was the creation of Man; and, in this last work, the final part was the breathing into man the breath of life, and he became a living soul. These are the materials you have to deal with—the body and life of human beings. In the language of Tennyson:

"Life is not an idle ore,
But iron dug from central gloom,
And heated hot with burning fears,
And dipped in baths of hissing tears,
And battered by the shocks of doom,
Into form and use."

Graduation

The day of graduation is to the nurse a new birth. So far she has been carrying on her work and acquiring her professional education as one of a group, and under the guidance and teaching of others. Now, she becomes an individual entity and is placed on her own initiative in the matter of further study and improvement. The responsibility and the possibilities are great, and they are yours now—

"You are the master of your fate,
You are the captain of your soul."

"Blessed are they", said Carlyle, "who have found their work, and know it. Let them seek no greater blessedness". This is a great gospel, for there is nothing so ennobling as the performing of some useful duty in the order of things on this mundane sphere: in the words of Shelley, "this alone is life, joy, empire and victory".

Your diploma is your passport into an ancient and noble profession, but the maintenance of that nobleness depends to a great extent upon the nobleness of the individuals who compose the group. Here you have an important role to play; therefore, play up, play up, and play the game. "Act well your part, there all the honour lies". The following lines from Clough, a poet of rare clarity of thought, may appropriately find a place here:

"To veer, how vain; on, onward strain,
Brave bark in light and darkness too;
Through winds and tides one compass guides;
To it and thine own self be true".

I bid you be of good hope, and may naught that is concealed in the years ahead daunt you, and may a kind providence amply bless you in the discharge of the duties that lie before you.

"To every one there openeth
A way, and ways, and a way,
And some take the high way,
And some take the low;
And in between on the misty flats
The rest drift to and fro;
But to every one there openeth
A high way and a low;
And every one decideth
The way the soul shall go".

Here and There in the Hospital Field

By THE EDITOR

Medical Exhibits

THE exhibit of the newer advances in medical science at the Golden Gate International Exposition at San Francisco contains much of interest to hospital people. In the Hall of Science there are many exhibitions graphically and dramatically arranged to portray the many developments in medicine and related sciences. The exhibit of the American Medical Association and of other organizations deals particularly with diagnoses. The life-size models of the human body to demonstrate anatomy, sponsored by the Mayo Foundation, have attracted large audiences. The present knowledge of cancer is clearly set forth in another exhibit. St. Francis Hospital in San Francisco portrays the steps in plastic surgery. The exhibit entitled "Magic", sponsored by the Pacific Roentengen Club draws large groups of spectators. The work of the Red Cross is also very graphically portrayed. We were particularly interested in "Voder" exhibited by the Bell Telephone Company. This is an apparatus which talks in an exceedingly good imitation of the human voice. The controls look like two stenotype machines, one for each hand, with certain foot levers to control inflection, and the conversation carried on between the demonstrator and the young lady operating the apparatus was quite uncanny.

In another medical exhibit, but in a side-show, we saw a "headless living" woman. Although certain that we were duped, we could not understand how. But that is another story.

* * *

High Cost of Hospital Service

A recent British hospital journal called attention to the fact that a little girl treated for tetanus in a voluntary hospital in Lincolnshire received almost 1,000,000 units of anti-toxin. This draws attention to the tremendous expense which our voluntary hospitals are called upon to lavish on patients if they desire to give these patients the benefits of modern scientific knowledge.

* * *

An Enviable Record

Some hospitals seem to instil into their various administrative assistants the spirit of leadership. General Frederic A. Washburn, Director Emeritus of the famous old Massachusetts General Hospital in Boston, has recently completed the history of this great institution. After noting a long list of the nation's outstanding administrators who obtained their administrative training in this hospital, the author recalls that this hospital has contributed no less than *five* presidents to the American Hospital Association: Dr. H. B. Howard, Dr. Frederic A. Washburn, Dr. Joseph B. Howland, Dr. Louis H. Burlingham and the present administrator, Dr. Nathaniel W. Faxon.

Hospital Visitors

A new type of "visiting card", which should facilitate "visitor control" by the hospital, is now being used at the Kingston General Hospital, Ontario. The card reads:

"Realizing that too much visiting may tire you, I am asking the hospital to let you know that I called. I wish you a speedy recovery."

Another idea which should prove very popular with the patients, the visitors and the hospital, has been put into practice at the same hospital. Instead of buying the usual gift of flowers or fruit, the visitor may pay a day's hospital bill, whereupon the hospital delivers to the patient a card which reads:

"This indicates that you are my guest in this hospital for the day. I wish you a speedy recovery."

The adoption of this idea means that financial assistance, which, no matter how welcome, might prove embarrassing under other circumstances, can be accepted graciously as well as gratefully by the patient.

* * *

The Morning Smile

You know how some folks are in the morning before they get their coffee? At the Peralta Hospital in Oakland, California, they make sure that the day is started right for each patient by having a dainty little Chinese girl in a colourful native costume visit each patient first thing in the morning, before breakfast, and leave a cup of hot coffee. The superintendent, Mr. George U. Wood, tells us that the result has been away beyond their expectation.

* * *

War Crises and Frayed Nerves

Medical psychologists at the Tavistock Clinic, Bloomsbury, according to *The Hospital*, consider that the severity of post-war nervous disorders in Great Britain has increased substantially as a result of the September and subsequent international crises. The staff of the clinic has been working at high pressure to keep pace with the cases requiring assistance and the number of cases under treatment has increased tremendously in the last few months. In all probability the present crisis as we go to press will still further upset the nervous and mental stability of many whose memories recall the Great War.

* * *

"Aluminum Lungs"

Now that iron locomotives and steel coaches are being replaced by aluminum alloy stream-lined trains, it was but to be expected that the much advertised iron lung would be replaced by an up-to-the-minute aluminum lung. Streamlined and light weight, this new apparatus embodies a number of the latest improvements in this type of apparatus.

Ontario Hospital Association News

ARRANGEMENTS for Canadian hospitals to take advantage of the benefaction of Lord Nuffield, noted British philanthropist, who recently offered to provide an "Iron Lung" for every hospital in the British Empire, have been completed by the Department of Pensions and National Health, under authority of Hon. C. G. Power. How many lungs will be shipped to Canada is not yet known; but already 31 institutions in Nova Scotia alone have applied for the gifts and it is expected several hundred units will be provided for Canada. Since the "Iron Lung" is a gift, the only expense to any hospital desiring one is in transportation from the Nuffield Works at Cowley, England, to the nearest railway station in Canada. Federal authorities at Ottawa have ruled that there will be no Federal charges such as customs, sales tax, etc., and one steamship line has offered, it is reported in the press, to carry all Iron Lung shipments from England free to Western Canadian ports, via the Panama Canal. Distribution of the gifts in Canada is being arranged by the Department of Pensions and National Health in co-operation with health departments of the various provinces.

Sir John Boyd Orr, one of the world's leading nutrition experts, is in Canada. He is here on a lecture tour under the auspices of the Canadian Medical Association, the details of which have been arranged by Dr. F. F. Tisdall.

Financial assistance to the extent of $5,000 has been promised St. Joseph's Hospital, Chatham, by the city council, towards the building of their new wing.

The first patients were placed in the Ontario Government's $5,000,000 mental hospital south of St. Thomas, on Tuesday, April 11th, it is reported. Premier M. F. Hepburn announced that a number of patients would be transferred from the London, Ontario, hospital. It is expected that 600 or 700 patients will be brought to the new hospital within the next two or three months, as the buildings are completed and are placed in operation.

Hospital Board, Hamilton, are asking the Board of Control for an appropriation of $900 to provide ambulance transportation for patients from the General Hospital to the maternity wing of the Mount Hamilton Hospital.

Ontario Conference of the Catholic Hospital Association took place in Windsor in the latter part of March, delegates attending from a large number of points in the province. His Excellency the Most Rev. J. T. Kidd, Bishop of London, attended.

The General and Marine Hospital Board, Collingwood, unanimously favours retaining the isolation hospital despite the recommendation of the Board of Health that the isolation building be discarded.

A drive to raise $50,000 in aid of Hotel Dieu, Windsor, officially got under way on Monday, April 10th. The funds are to be applied towards reduction of the hospital's debt, wholly incurred through erection of the new wing.

—F. W. Routley, M.D.

* * *

WOMEN'S HOSPITAL AIDS ASSOCIATION

The President of Women's Hospital Aids Association, Province of Ontario, has sent out the following national Hospital Day message: "This day is commemorated by hospital-minded persons to honour the birthday of Florence Nightingale, Patron Saint of Nursing, who exerted the first great world-influence in hospital care for the sick and injured and was adviser to the world in nursing. Her nurses went to the ends of the earth to establish the principles she had laid down, consequently it is fitting that this day is set apart to give opportunity to the community to know its hospital.

"Mr. and Mrs. Citizen! boys and girls, will you join on this day in paying tribute to hospital service in your community—become better acquainted with its needs and its deeds.

"Has it ever occurred to you that the doors of the hospital are never closed—the service and supply never cease—every unit working uninterruptedly so as to give unbroken care and treatment to those who are within its walls? The admitting service, the telephone service, laboratory, x-ray, diet, surgical, medical—not to say of the understanding and humanitarian attention given by the entire staff at all times. Illness and accident do not choose daylight hours in which to strike.

"Hence the hospital stands ready to have emergency service available to meet every need. Is it any wonder this Great Heart, Your Hospital, should have the understanding and complete loyalty of every citizen, when so great and needful a service is given. Visualize your community without hospital service. We cannot count our hospitals in terms of material expenditures, but in health preservation and the saving of human lives.

"The foregoing is merely touching the hem of this sacred avenue of His great gift to mankind—for has not every field of science laid manifold gifts upon its altar.

"There is an invincible hospital army ever spending itself to serve humanity day and night. We as lay people, strive to do our part as volunteer workers to make it easier for hospital superintendent and hospital board to run hospitals. It is the desire of every hospital auxiliary member to place a stepping-stone instead of a stumbling block to advance hospitalization in the community. God bless your hospital, the doctors and the nurses too, who stand on guard, their faithful watches keeping, the long nights through. It matters not if you are prince or pauper, God stands beside you in the hours of pain; an army of white nurses do His bidding and you are helped to restore your health again."

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The Round Table Forum

9. What is the Best Method of Controlling the use of Linen and Surgical Supplies?

Margaret Murdoch, R.N., Superintendent of Nurses, Saint John General Hospital, Saint John, N.B.

WE find, in this hospital, that the best way to control the use of linen is for the supervisors to requisition daily from the linen room, the amount required for twenty-four (24) hours. This requisition is calculated on the daily census of patients.

Linen is kept in a locked closet and issued only by the supervisor, thus a close control is kept of it at all times.

Surgical supplies are made up and kept in a central supply room, where a graduate nurse is in charge. Requisitions are sent in daily for the twenty-four (24) hour supply, so that at no time is there an excess on the wards.

All requisitions for both linen and surgical supplies are checked in the Training School Office.

Amy Mendels, Superintendent of Nurses, Jewish General Hospital, Montreal, Que.

For controlling the use of linen there must be:

1. An adequate supply.
2. Immediate replacement of discarded linen.
3. Specific markings on all linen indicating floors or wards, thus insuring automatic return after laundering.

The central supply room seems to offer the best and most economical method of control for surgical supplies. In hospitals where the full adoption of the central system is not possible, the control can be improved by the introduction of the tray system for the most important and more commonly used procedures prepared and issued by one responsible department.

Jessie M. Wilson, R.N., Superintendent, The Memorial Hospital Trust, St. Thomas, Ontario.

Controlling the use of linen is one of the most difficult ward problems which the administrator has to consider.

It is my belief that linen should pass directly from the laundry to a linen room and be delivered to the ward only upon receipt of a signed requisition.

Surgical supplies may be handled in like manner from a central storeroom.

Both problems might be solved if the ward personnel could be educated against the waste of supplies and the unnecessary changing and washing of linen.

Rev. Sr. Mary Alfreda, Superior, St. Joseph's Hospital, Victoria, B.C.

We arrived at a more satisfactory method of controlling both linen and surgical supplies after establishing a central service department for each.

Requisitions from the wards go to both departments in the morning but unforseen orders are promptly filled during the day or night.

Control of surgical supplies is particularly easy with a central service department. Service trays have itemized lists of supplies. These are checked when they are returned from the ward and charges made accordingly.

Barbara Bell, R.N., Superintendent, Oshawa General Hospital, Ontario.

Linen requirements are requisitioned twice a day from the central linen room. The afternoon requisition is only such as may be required to take care of those beds where patients have been discharged from the hospital.

Surgical supplies are requisitioned daily from a central supply room—the quantity being governed by the number and kind of dressings to be done. At the end of each quarter these requisitions are totalled, priced and charged to each department. These totals with their cost are then posted on the bulletin board for the general information of all nurses.

Hilda Boutilier, R.N., Assistant Superintendent, City of Sydney Hospital, Sydney, N.S.

Our system for controlling the use of linen in our hospital is as follows:

1. Inventory of linen once a month.
2. Daily requisitioning for linen and distribution the following a.m.
3. All departments marked with different coloured tape.

For the control of surgical supplies we use the following system:

1. Central Supply Room, with nurse in charge, controlling the use of all trays and equipment used on floors. This system has proved very satisfactory and our supplies last much longer.
2. Bi-weekly requisitions. Daily requisition of sterile dressings, etc.
3. Exchange system for broken syringes, thermometers, etc.
4. Inventory of all supplies once a month.

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Ontario Hospital Association Holds Successful Convention

THE Ontario Hospital Association presented a most interesting and inspiring programme at its 16th annual convention on May 2nd, 3rd and 4th at the Royal York Hotel, Toronto. There was an excellent registration and a fine display of commercial exhibits.

Dr. Fred W. Routley, Secretary-Treasurer of the Association, who read the annual report, in commenting on the difficulties which hospitals are at present facing, stated: "The only possible way in which we can hope to face these problems successfully is by marching together". Ontario hospitals, he said, were to be complimented on their almost one hundred per cent. membership in the association.

One of the most important discussions of the convention was that initiated by Mr. R. Fraser Armstrong, Kingston, Chairman of the Committee on Hospital Care Insurance, in his paper on prepaid hospital care. In the discussion which followed, interest centred on the desirability of a province-wide plan enrolling all hospitals, the question of sponsorship by the Association, the benefits of full or partial coverage plans and the necessary steps to ensure economic soundness, and the stimulation of public interest in the voluntary type of plan. At the conclusion of the discussion the meeting authorized the committee to continue in the study of such plans and the preparation of model plans which the Board of Directors might present to the local communities.

Dr. T. C. Routley, General Secretary, The Canadian Medical Association, the guest speaker at the luncheon, spoke on "Cancer Control". Dr. Routley called upon the hospital workers to support the work being done by the Department of Cancer Control of the Canadian Medical Association and the Canadian Society for the Control of Cancer in the unique war being waged across Canada, a war "not to annihilate, but to save man".

Dr. John C. Mackenzie, superintendent of the Montreal General Hospital, spoke at the Open Session conducted by the Nurses' Section on "The Preparation of the Nurse for the Post of Hospital Administrator". Dr. Mackenzie stressed the value of the specialized knowledge which the nurse brings to the field of hospital administration. He stated that the responsibility for provision of adequate education for the career of hospital administration lies now with the universities. A panel discussion led by ten nurse superintendents on various problems in hospital administration completed that session.

The programme arranged by the Women's Hospital Aids Association of Ontario included a message from Dr. Harvey Agnew, President of the American Hospital Association, on the programme planned for that great hospital gathering, the International Hospital Congress and the American Hospital Association Convention next September. Mrs. O. W. Rhynas, who presided at this session, announced that the Women's Hospital Aids Association of Ontario had been received into membership by the International Hospital Association—the first women's auxiliary organization to be so honoured.

Dr .J. H. Holbrook of Hamilton discussed the social service problems under the new Sanatoria Act which went into effect July, 1938. Dr. Holbrook described the new Act as bringing the day of practical reduction of tuberculosis much closer than could have been hoped for under the old act. He suggested that the Women's Hospital Aids organize clubs in each community of the province to look after the home problems of tubercular patients who have been discharged from hospital. Mrs. R. F. Inch of the Hamilton branch of the Hospital Aids gave a most interesting paper on the establishment of a Children's Convalescent Camp at Hamilton by the local branch.

In the absence of Mr. James Hamilton of New Haven, Dr. Harvey Agnew, Miss E. M. McKee and Mr. C. I. Flath presented a symposium on hospital administration, considering hospital administration as a profession, the preparation required for hospital administration and the importance of keeping abreast of the new advances in hospital administration. The remainder of the trustees' session was given over to the consideration of financial and business problems of the hospital. Mr. C. M. Piercy of Hamilton spoke on hospital collections, and Mr. V. C. Nauman of the Department of National Revenue discussed hospital exemptions from sales tax.

Dr. W. J. Dobbie's paper on the need for a rational medical technique for the safe-guarding of attendants and students was followed by a panel discussion which emphasized the importance of instruction to attendants, adequate facilities and time to carry out proper technique.

Colonel George A. Drew, K.C., guest speaker at the banquet, advocated, as one approach to the problem of hospital costs, the establishment of a non-militaristic physical training for boys and girls of early school age. A lowering of hospital costs would be one of the many benefits resulting from a training which would provide for physical fitness of the youth of Canada. Mr. David Williams in his presidential address, challenged the Ontario Hospital Association to take the lead in effecting the obviously necessary changes in our present system of medical and hospital service, and concluded with the plea that "hospitalization be brought closer to those who constitute the mass of our population, those who constitute that middle section on which, in a large measure, the welfare of our national future depends".

The Association of Record Librarians of Ontario and the Ontario Association of Medical Social Workers held two very interesting sessions in conjunction with the Ontario Hospital Association.

Officers

Officers elected were: Hon. President, Mr. A. J. Swanson, Toronto; Hon. Vice-President, Mr. David Williams, Collingwood; President, Dr. L. C. Fallis, London; President Elect, Mr. C. J. Decker, Toronto; first Vice-President, Mrs. O. W. Rhynas, Burlington, and second Vice-President, Mr. Clark Keith, Windsor.

—F. C.

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L. D. Currie is Now Minister of Mines and Labour in N.S.

The many friends of Mr. L. D. Currie, M.P.P., of Glace Bay, Nova Scotia, will be delighted to note that he is now the Honourable L. D. Currie, Minister of Mines and Labour of the Province of Nova Scotia. Mr. Currie has long been a friend of the hospitals. Representing St. Joseph's Hospital of Glace Bay, in the Hospital Association of Nova Scotia and Prince Edward Island, he very soon became President of that body. Mr. Currie participated in the organization meeting of the Canadian Hospital Council in 1931 and ever since has been a staunch supporter of this body. The original Constitution of the Canadian Hospital Council was in large part drawn up by Mr. Currie, whose legal advice was freely donated to the Council. The Nova Scotia Government will be greatly strengthened by the inclusion in its Cabinet of this conscientious and public-spirited member, whose oratory and debating ability have already made him a marked man. Congratulations!

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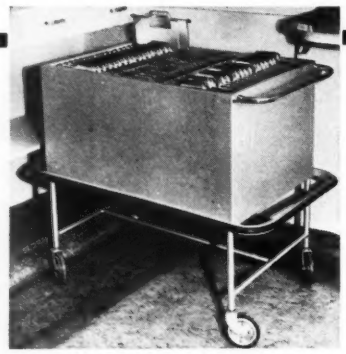

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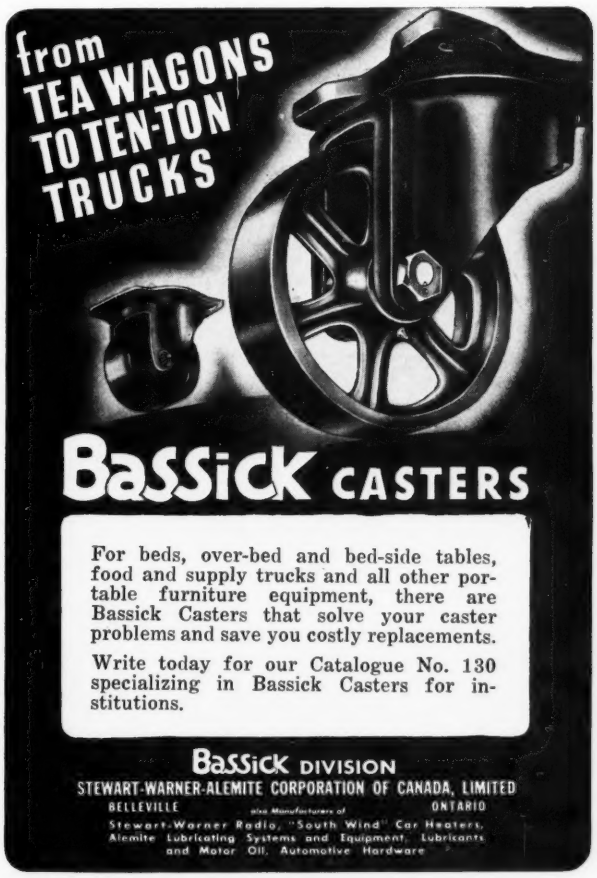
Hospital Day Radio Broadcast

Hospital Day observance is to receive full radio co-operation again this year. It has been arranged, through the courtesy of National Broadcasting Company, that there be a continent-wide hookup from 6.30 -6.45 p.m. EDST on Thursday, May 11th. The speaker will be Dr. Harvey Agnew of Toronto, President of the American Hospital Association. The National Broadcasting Corporation has arranged to have the address transmitted from Toronto.

At the time of going to press, information received would indicate that this broadcast is not being carried in Canada.

N.B. and N.S. and P.E.I. Associations to Meet Simultaneously

Arrangements are being completed for the simultaneous meetings of the New Brunswick Hospital Associations and the Hospital Association of Nova Scotia and Prince Edward Island. These meetings are to be held on Thursday and Friday, June 15th and 16th. The New Brunswick meeting will be held in Sackville in one of the assembly halls in Mount Allison University. At the same time the hospital association of Nova Scotia and Prince Edward Island will meet in the city of Amherst, eight miles away across the historic and beautiful Tantremar marshes. It is anticipated that at least one of the sessions will be a joint session for the discussion of matters of mutual interest.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Damage Suit Against Hotel Dieu, Windsor, Ontario, Dismissed

The $5,000 suit of a former surgical supervisor against the Hotel Dieu Sisters was dismissed without costs at non-jury sittings of the Supreme Court at Windsor, Ontario, on March the 29th. Mis Helena Mahoney, plaintiff, claimed that moisture from a bursting rubber glove shot into her right eye, causing an infection which seriously impaired her vision. She alleged negligence of hospital authorities in leaving a "soiled" glove about. Mr. Justice Green stated in giving judgment that there was no proof that the infection came from the glove.

The Small Hospital

(Continued from page 16)

inferred from a study of hospital statistics. In 1936, 40 per cent of the total hospital days for Alberta were in hospitals of thirty beds or less. The average annual occupancy for the small hospital is about 50 per cent. The larger hospitals averaged 64 per cent occupancy in 1930 but in 1936 this had stepped up to 79 per cent. During 1937-38 ten more hospitals under 100 beds were opened, bringing the total to eighty-four.

Although there are more total beds in smaller hospitals than in larger ones, the smaller hospitals only have about 40 per cent of the patient-days. Does this suggest that the small hospital is not operating as efficiently as it should, or might it be that it has not met the needs as we have outlined them above, and, in consequence, cannot provide the services. Since these institutions are performing 40 per cent of our medical services, we must do what we can to help them become more efficient, and indirectly, to increase the amount of services rendered to the public.

The small hospital is also of importance to its community as a dispenser of those activities which might be broadly classed under the head of public health. Many of these smaller hospitals are in districts where public health services are not adequately organized, and it is from the hospital and through its patients that there is gradually disseminated information which leads to better health habits and a definite improvement in the general health and living habits of the community. This phase of the hospital's activity is probably more important in our western provinces than in many other parts of the continent.

Limitations of the Small Hospital

It is obvious that few hospitals of thirty beds or under are in a position to meet *all* the requirements outlined above. Therefore, the major type of work should not often be attempted in the smaller institutions, and the public ought to be trained not to expect it. I have no doubt that, so far as medical services to the rural community are concerned, these districts would be much better served and medicine would be more scientifically practised if, on the one hand, there were fewer small institutions attempting to do the major type of work, and, on the other, an increasing number of the larger of the small hospital group were sufficiently well equipped and well staffed to meet the requirements of the present day knowledge of diagnosis and treatment. These communities need our services. Our problem is to give it to them adequately and efficiently.

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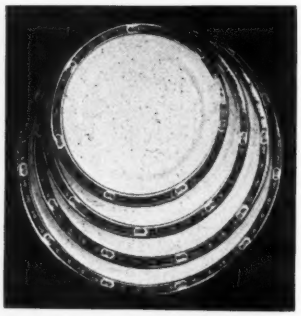

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Artificial Respiration

(Continued from page 18)

in a small glass of water or a hot drink of coffee or tea, etc. The patient should be kept warm.

(9) Resuscitation should be carried on at the nearest possible point to where the patient received his injuries. He should not be moved from this point until he is breathing normally of his own volition and then moved only in a lying position. Should it be necessary, due to extreme weather conditions, etc., to move the patient before he is breathing normally, resusciation should be carried on *during* the time that he is being moved.

(10) A brief return of natural respiration is not a certain indication for stopping the resuscitation. Not infrequently the patient, after a temporary recovery of respiration, stops breathing again. The patient must be watched and, if natural breathing stops, artificial respiration should be resumed at once.

(11) In carrying out resuscitation, it may be necessary to change the operator. This change must be made without losing the rhythm of respiration. By this procedure no confusion results at the time of change of operators and a regular rhythm is kept up.

The ordinary and general tests for death should not be accepted and the doctor or intern should make several very careful and final examinations and be sure *specific* evidence is present before pronouncing the patient dead.

As has been stated above, the simple instruction of people in artificial respiration has not been sufficient to produce well trained persons at an actual case where resuscitation is required. The method of training used is as follows:

After an explanation of the method, the people to be trained are arranged in pairs—one acting as the patient and the other as the operator. The instructor carefully checks each operator to be sure that he is carrying out the artificial respiration correctly and after five minutes of artificial respiration, the operator becomes the patient and the patient the operator and the procedure is again carried through. It is wise to have those persons who should be trained and ready for an emergency, to regularly practice artificial respiration. In the public utilities, this practice is carried out at least once a month and it is only by this means that prompt and efficient application of artificial respiration has been obtained. As it is necessary at times to carry out artificial respiration over a considerable period, employees are also trained in a simple and effective method of changing from one operator to the next.

Briefly stated the most salient points in artificial respiration are the following.

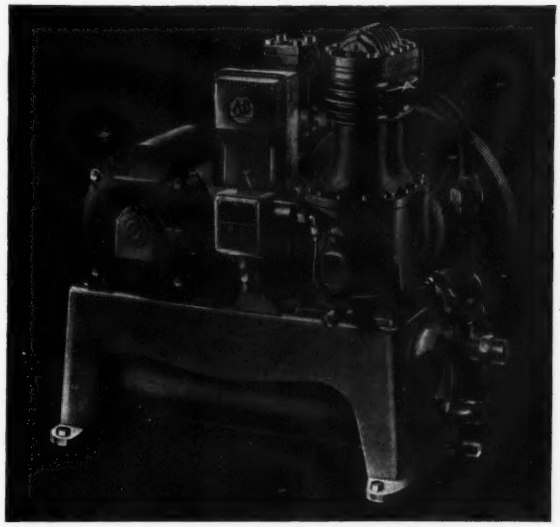
1. Clear the victim as quickly as possible.

2. Apply artificial respiration with as little delay as is possible. Do not waste time trying to move the patient to some more convenient spot.

3. Use warmth, such as blankets, hot water bottles, etc.

4. Carry out artificial respiration until the patient breathes or there are definite signs of the onset of rigor mortis.

5. Transport the patient in a lying down position to his home or hospital. Put him to bed and treat as for surgical shock.



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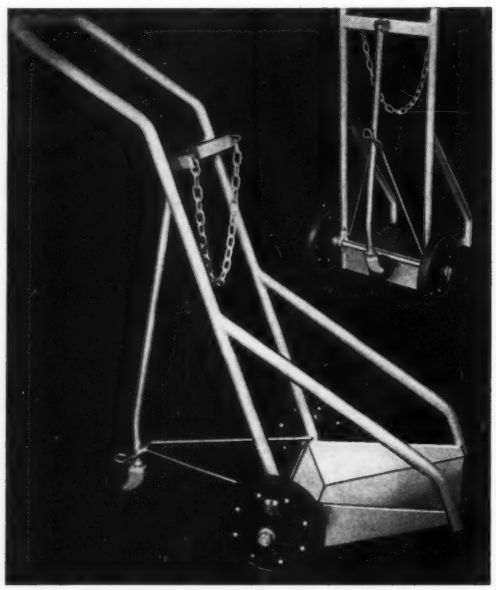

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Preparations for Intravenous Solutions at the Royal Jubilee Hospital, Victoria, B.C.

(Continued from page 21)

which are attached to the sets. In a book provided for the purpose, the nurse enters the check number, type of solution received, patient's name and ward and then signs her own name.

After use the sets are rinsed thoroughly with cold tap water on the ward before being returned to the supply room where they are immediately dismantled and subjected to the cleaning process already described.

At the time that the apparatus is returned to the supply room there is also filed an "Intravenous Medication Report" upon which is indicated the name of the patient, type and amount of solution administered; the name of the intern administering such and the date upon which the solution was autoclaved. This information is posted daily into the record book in the central supply room.

All intravenous solutions are administered at *ordinary room temperature*, no attempt being made to raise the temperature of the solution to be administered. All attempts to devise a satisfactory method for maintenance of such temperature were unsuccessful, particularly with regard to the requirement of uniformity and restriction within safe limits in the hands of a varied personnel in the persons of undergraduate nurses. A point is made of slow administration, approximately one hour and a half being consumed for the administration of 1000 cc. of solution.

This equipment and the methods described had been in use for a period of 14 months on March 20th, 1939. During this time a total of 2955 intravenous medications were administered, varying in amount from one half to several litres each. In no case has there occurred a reaction of any degree whatsoever and in no case have there been observed any symptoms following administration which could in any way be attributed to this form of therapy.

In this hospital such a record is unique and is a welcome contrast to the state of affairs in existence prior to the introduction of the new methods.

Standardisation de la Comptabilité des Hôpitaux

(Continued from page 23)

bilité uniforme, que la méthode standardisée par l'American Hospital Association, soit adoptée par tous les hôpitaux. Cette méthode est la suivante:

> "Le nombre de patients à l'hôpital à minuit; plus les admissions et les naissances; moins les départs et les décès; plus le nombre de patients admis et qui ont reçu leur congé ou sont décédés le même jour".

Le problème de standardisation de la comptabilité des hôpitaux est encore loin d'être résolu. Il y a lieu d'espérer, cependant, qu' avec la coopération des gouvernements provinciaux, il pourra l'être un jour.

Montreal Hospital Receives Bequest for Library

The Royal Victoria Hospital of Montreal has received $2,000, under the will of the late Miss Inez M. Baylis, for the maintenance and extension of the hospital library.

In Obstetrics and Surgery...

'DETTOL' *FILLS A NEED*

"'DETTOL'—In contrast to its very low toxicity for skin and mucous membranes, its effect on the bacteria with which we are concerned in puerperal fever is high. Streptococcus pyogenes and B. Coli, even in the presence of pus are killed within two minutes by a two percent solution."

JOURNAL OF OBSTETRICS AND GYNAECOLOGY OF THE BRITISH EMPIRE, VOL. 43 NO. 6, 1935

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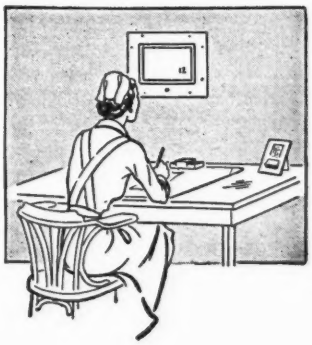

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Maritime Hospital Receives Bequest

Under the will of the late Mrs. Mardy Deal Hallet of Boston, the Payzant Memorial Hospital, Windsor, Nova Scotia, has received $5,000, half of which is for the general use of the hospital as the Board of Management may determine and one half for a designated purpose.

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36" x 120" Asher Ironer, only slightly used. Terms to suit purchaser. Box 129-C, The Canadian Hospital, 177 Jarvis St., Toronto.

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Convention of the Canadian Society of Laboratory Technologists—to be Held in London, Ontario.

Organized to unite the laboratory workers throughout Canada in a progressive movement for improved standards of laboratory work and to raise the qualifications of laboratory workers, this young and vigorous association will convene for the third time on May 19th and 20th at the Hotel London to review the advances and accomplishments of the past year.

The Society aims to improve the qualifications and standards of laboratory technologists, to promote research endeavor in all branches of laboratory work, the recognition of a professional status for laboratory technicians and a closer co-operation between the medical profession and the technician. Membership is open to anyone with matriculation standing who is actively engaged as a laboratory technician.

Hôpital Notre-Dame Elects Medical Bureau

At the recent election of the Medical Bureau of Hôpital Notre-Dame, Montreal, Dr. Antonio Bellerose was elected President, replacing Dr. J. A. Mousseau. Dr. Roma Amyot is Vice-president, Dr. J. C. Doucet, Secretary, Dr. Georges Hébert, Ass't-Sec., and Dr. E. Ménard, Librarian.